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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/939,069	08/24/2001	James T. Veligdan	BSA 99-36	4263

7066 7590 10/23/2002

REED SMITH LLP
2500 ONE LIBERTY PLACE
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PHILADELPHIA, PA 19103

EXAMINER

CRUZ, MAGDA

ART UNIT PAPER NUMBER

2851

DATE MAILED: 10/23/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/939,069

Applicant(s)

VELIGDAN ET AL.

Examiner

Magda Cruz

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 August 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-40 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-15, 17-35 and 37-40 is/are rejected.
- 7) ☒ Claim(s) 16 and 36 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Drawings

1. This application has been filed with informal drawings which are acceptable for examination purposes only. Formal drawings will be required when the application is allowed.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-6, 8-10, 12-13, 21-26, 28-30 and 32-33 are rejected under 35 U.S.C. 102(b) as being anticipated by Takahashi, et al.

Takahashi, et al. (US Patent Number 4,729,631) discloses an optical display system (Figure 1) for displaying a projected image and method for the same, comprising a projector that projects an image beam (P); a prismatic optical panel (S) optically aligned with said projector, wherein said panel receives said beam, turns said image beam, and displays said turned image beam (column 5, lines 14-36). The panel (S) includes a prismatic first side (1A, 1B) optically aligned with said projector for receiving said image beam at an acute angle of incidence (column 4, lines 25-37), wherein said panel (S) is effective for reflecting said image beam (Figure 4), and wherein said panel

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displays said reflected image beam from an opposite second side thereof (Figure 3).

The panel (S) first side includes a multitude of parallel elongated prisms (1), wherein said imaging optics are aligned with said first side for projecting said image beam transversely across said prism (1) for being transversely expanded at said panel second side (column 2, lines 4-15). Each of said prisms includes a first facet (1A) for channeling said image beam therethrough, and an opposite second facet adjoining said first facet (1A) for reflecting said image beam toward said panel second side (1B), having an apex angle (θ_1) therebetween.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 7, 11, 14, 27, 31 and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takahashi, et al. in view of Takada et al.

Takahashi, et al. (US Patent Number 4,729,631) teaches the salient features of the present invention, except a diffuser at said panel second side, a mirror coating for effecting specular reflection of the image beam inside the prisms, and a light control layer.

Takada et al. (US Patent Number 6,020,090) discloses a diffuser (523) at said panel second side, a mirror coating (column 25, line 27) for effecting specular reflection

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of the image beam inside the prisms (614), and a light control layer (column 2, lines 20-30).

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to utilize the diffuser, mirror coating and light control layer disclosed by Takada et al. in combination with Takahashi, et al.'s invention, for the purpose of producing an image capable of increasing a visible area during reproduction.

6. Claims 15, 17, 35 and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takahashi, et al. in view of Takada et al. as applied to claims 7, 11, 14, 27, 31 and 34 above, and further in view of Blanchard.

Takahashi, et al. (US Patent Number 4,729,631) in combination with Takada et al. (US Patent Number 6,020,090) teaches the salient features of the present invention, except microlouvers, which direct the projected image to a desired location, wherein said microlouvers are encased in a thin film comprised of plastic or glass.

Blanchard (US Patent Number 5,543,870) discloses microlouvers (column 8, line 18), which direct the projected image to a desired location (column 8, lines 20-21), wherein said microlouvers are encased in a thin film comprised of plastic or glass (column 7, lines 61-65).

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to utilize the microlouvers disclosed by Blanchard, in combination with Takahashi, et al. and Takada et al.'s invention, for the purpose of effectively diffusing the image through a wider viewing angle pattern.

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7. Claims 18-19 and 38-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takahashi, et al. in view of Laine et al.

Takahashi, et al. (US Patent Number 4,729,631) teaches the salient features of the present invention, except a panel including a tint comprising dark dye molecules or dark particulates.

Laine et al. (US Patent Number 4,792,209) discloses a panel (i.e. one of the elements of the projection screen; element 12) including a tint comprising dark dye molecules or dark particulates (column 7, lines 61-66).

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to utilize the panel with the dark dye, disclosed by Laine et al. in combination with Takahashi, et al.'s invention, for the purpose of minimizing the light scattering, thereby improving the sharpness of the image.

8. Claims 20 and 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takahashi, et al. in view of Takada et al. as applied to claims 7, 11, 14, 27, 31 and 34 above, and further in view of Laine et al.

Takahashi, et al. (US Patent Number 4,729,631) in combination with Takada et al. (US Patent Number 6,020,090) teaches the salient features of the present invention, except a tint comprising dark dye molecules or dark particulates.

Laine et al. (US Patent Number 4,792,209) discloses that one of the elements of the projection screen comprises a tint comprising dark dye molecules or dark particulates (column 7, lines 61-66).

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It would have been obvious to one of ordinary skill in the art at the time of the invention was made to utilize the dark dye, disclosed by Laine et al. in combination with Takahashi, et al.'s invention, for the purpose of minimizing the light scattering, thereby improving the sharpness of the image.

Allowable Subject Matter

9. Claims 16 and 36 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

10. The following is a statement of reasons for the indication of allowable subject matter: the prior art does not teach a display system, comprising in combination with the additionally recited elements, microlouvers in dark color such that the ambient light is absorbed thereby enhancing contrast of said projected image.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Magda Cruz whose telephone number is (703)308-6367. The examiner can normally be reached on Monday through Thursday 8:00-5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Russ Adams can be reached on (703)308-2847. The fax phone numbers

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for the organization where this application or proceeding is assigned are (703)872-9318 for regular communications and (703)872-9319 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)308-1782.

A handwritten signature in black ink, appearing to read "Russell Adams", is written over the typed name.

RUSSELL ADAMS
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800

Magda Cruz
Patent Examiner
October 19, 2002

FORM PTO-1449 U.S. DEPARTMENT OF COMMERCE
(MODIFIED) PATENT AND TRADEMARK OFFICE
**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**
(Use several sheets if necessary)
(37 CFR 1.96(b))

ATTY. DOCKET NO.
BSA 99-36

SERIAL NO.
Not Yet Assigned

APPLICANT
Veligdan et al

FILING DATE
August 24, 2001

GROUP
Not Yet Assigned

U.S. PATENT DOCUMENTS

EXAMINER INITIAL	PATENT NUMBER	ISSUE DATE	PATENTEE	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
mc	3 2 5 3 5 0 0	05/1966	Hicks, Jr.	385	120	
mc	3 8 7 4 7 8 3	04/1975	Cole	385	115	
mc	4 1 1 6 7 3 9	09/1978	Glenn	156	169	
mc	4 3 4 4 6 6 8	08/1982	Gunther et al.	385	120	
mc	4 4 1 8 9 8 6	12/1983	Yata et al.	359	456	
mc	4 4 6 9 4 0 2	09/1984	Yata et al.	359	457	
mc	4 5 8 6 7 8 1	05/1986	Gunther et al.	359	15	
mc	4 6 7 4 8 3 6	06/1987	Yata et al.	359	457	
mc	5 0 6 6 9 4 7	11/1991	Du Castel	340	815.42	
mc	5 2 7 4 4 0 6	12/1993	Tejima et al.	353	70	
mc	5 3 8 1 5 0 2	01/1995	Veligdan	385	115	
mc	5 4 2 2 6 9 1	06/1995	Ninomiya et al.	353	69	

FOREIGN PATENT OR PUBLISHED FOREIGN PATENT APPLICATION

DOCUMENT NUMBER	PUBLICATION DATE	COUNTRY OR PATENT OFFICE	CLASS	SUBCLASS	TRANSLATION
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OTHER DOCUMENTS (Including Author, Title, Date, Relevant Pages, Place of Publication)

mc	Veligdan, "Unique Interactive Projection Display Screen", 9/29/97, 7 pages.
mc	Beiser, et al., "Ten Inch Planar Optic Display", Proceedings of the International Society for Optical Engineering (SPIE), Vol. 2734, April 1996, 9 pages.
mc	Yoder, "The State-of-the-Art in Projection Display: An Introduction of the Digital Light Processing DLP", Texas Instruments Web Site, March 1997, 5 pages.
EXAMINER	DATE CONSIDERED
Magda Cruz	10/18/2002

EXAMINER: Initial citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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EXAMINER INITIAL	PATENT NUMBER	ISSUE DATE	PATENTEE	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
mc	5 4 5 5 8 8 2	10/1995	Veligdan	385	116	
mc	5 4 8 1 3 8 5	01/1996	Zimmerman et al.	349	62	
mc	5 5 2 1 7 2 5	05/1996	Beeson et al.	349	95	
mc	5 6 2 5 7 3 6	04/1997	Veligdan	385	120	
mc	5 6 4 2 4 4 9	06/1997	Phillips	385	33	
mc	5 6 6 8 9 0 7	09/1997	Veligdan	385	120	
mc	5 6 8 4 9 0 5	11/1997	Sugawara et al.	385	120	
mc	5 7 1 6 1 1 8	02/1998	Sato et al.	353	98	
mc	5 7 6 4 8 4 5	06/1998	Nagatani et al.	385	146	
mc	5 9 1 4 7 6 0	06/1999	Daiku	349	65	
mc	5 9 4 0 5 5 6	08/1999	Sugawara	385	28	
mc	6 0 0 2 8 2 6	12/1999	Veligdan	385	120	
mc	6 0 1 2 8 1 6	01/2000	Beiser	353	122	
mc	6 0 3 1 9 5 4	02/2000	Higuchi	385	120	

FOREIGN PATENT OR PUBLISHED FOREIGN PATENT APPLICATION

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OTHER DOCUMENTS (Including Author, Title, Date, Relevant Pages, Place of Publication)

mc	DeSanto, et al., "Polyplanar Optical Display Electronics", Proceedings of the International Society (SPIE), Vol. 3057, April 1997, 12 pages.
mc	Dai Nippon Corp, "dnp Black Stripe Screen," internet brochure, 3/2000, three pages
mc	3M, "3M Transmissive Right Angle Film II," product literature, 2 pages, 1996

EXAMINER

Magda Cruz

DATE CONSIDERED

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EXAMINER INITIAL	PATENT NUMBER	ISSUE DATE	PATENTEE	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
<i>mc</i>	4 9 0 6 0 7 0	03/1990	Cobb, Jr.	359	834	
<i>mc</i>	5 0 4 0 8 7 8	08/1991	Eichenlaub	349	62	
<i>mc</i>	5 1 3 0 8 9 8	07/1992	Akahane	362	31	
<i>mc</i>	5 3 9 4 3 0 8	02/1995	Watanabe et al	362	31	
<i>mc</i>	5 4 7 1 3 4 8	11/1995	Miller et al	359	837	
<i>mc</i>	5 4 7 7 4 2 2	12/1995	Hooker et al	362	29	
<i>mc</i>	5 5 9 4 5 6 1	01/1997	Blanchard	349	59	
<i>mc</i>	5 6 0 0 4 5 5	02/1997	Ishikawa et al	349	57	
<i>mc</i>	5 6 2 5 7 3 6	04/1997	Veligdan	385	120	
<i>mc</i>	5 7 1 8 4 9 7	02/1998	Yokoyama et al	362	31	
<i>mc</i>	5 7 3 5 5 9 0	04/1998	Kashima et al	362	31	
<i>mc</i>	5 7 7 1 3 2 8	06/1998	Wortman et al	385	146	
<i>mc</i>	5 7 7 9 3 3 7	07/1998	Saito et al	362	31	
<i>mc</i>	5 7 9 7 6 6 8	08/1998	Kojima et al	362	31	
<i>mc</i>	5 8 4 4 7 2 0	12/1998	Ohara et al	359	599	
<i>mc</i>	5 8 5 2 5 1 4	12/1998	Toshima et al	359	599	
<i>mc</i>	5 9 1 7 6 6 4	06/1999	O'Neill et al	359	831	
<i>mc</i>	5 9 2 6 6 0 1	07/1999	Tai et al	385	146	
<i>mc</i>	5 9 5 1 1 3 8	09/1999	Ishikawa	362	31	
<i>mc</i>	6 0 1 1 6 0 1	01/2000	Kojima	349	62	

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